

# SEQUENCE LISTING

<110> WEI, Ming-Hui

<120> ISOLATED HUMAN TRANSPORTER PROTEINS,  
NUCLEIC ACID MOLECULES ENCODING HUMAN TRANSPORTER PROTEINS,  
AND USES THEREOF

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 Leu Val Asp Leu Pro Asp Val His Thr Val Lys Pro Val Ala Thr Trp  
 180 185 190  
 Ala Thr Leu Pro Leu Tyr Phe Gly Thr Ala Ile Tyr Ala Phe Glu Gly  
 195 200 205  
 Ile Gly Val Val Leu Pro Leu Glu Asn Asn Met Arg Thr Pro Glu Asp  
 210 215 220  
 Phe Gly Gly Thr Thr Gly Val Leu Asn Thr Gly Met Val Ile Val Ala  
 225 230 235 240  
 Cys Leu Tyr Thr Ala Val Gly Phe Phe Gly Tyr Leu Lys Tyr Gly Glu  
 245 250 255  
 His Val Glu Gly Ser Ile Thr Leu Asn Leu Pro Gln Gly Asp Thr Leu  
 260 265 270  
 Ser Gln Leu Val Arg Ile Ser Met Ala Val Ala Ile Phe Leu Ser Tyr  
 275 280 285  
 Thr Leu Gln Phe Tyr Val Pro Val Asn Ile Val Glu Pro Phe Val Arg  
 290 295 300  
 Ser His Phe Asp Thr Thr Arg Ala Lys Asp Leu Ser Ala Thr Val Leu  
 305 310 315 320  
 Arg Val Val Leu Val Thr Phe Thr Phe Leu Leu Ala Thr Cys Ile Pro  
 325 330 335  
 Asn Leu Gly Ser Ile Ile Ser Leu Val Gly Ala Val Ser Ser Ser Ala  
 340 345 350  
 Leu Ala Leu Ile Ala Pro Pro Ile Ile Glu Val Ile Thr Phe Tyr Asn

355                      360                      365  
 Val Gly Tyr Gly Arg Phe Asn Trp Met Leu Trp Lys Asp Val Leu Ile  
 370                      375                      380  
 Leu Ile Phe Gly Leu Cys Gly Phe Val Phe Gly Thr Trp Ala Ser Leu  
 385                      390                      395                      400  
 Ala Gln Ile Leu

<210> 5  
 <211> 404  
 <212> PRT  
 <213> *Drosophila melanogaster*

<400> 5  
 Thr Ser Asn Phe Asp Thr Leu Val His Leu Leu Lys Gly Asn Ile Gly  
 1                      5                      10                      15  
 Thr Gly Ile Leu Ala Met Pro Asp Ala Phe Lys Asn Ala Gly Leu Tyr  
 20                      25                      30  
 Val Gly Leu Phe Gly Thr Met Ile Met Gly Ala Ile Cys Thr His Cys  
 35                      40                      45  
 Met His Met Leu Val Asn Cys Ser His Glu Leu Cys Arg Arg Phe Gln  
 50                      55                      60  
 Gln Pro Ser Leu Asp Phe Ser Glu Val Ala Tyr Cys Ser Phe Glu Ser  
 65                      70                      75                      80  
 Gly Pro Leu Gly Leu Arg Arg Tyr Ser Met Leu Ala Arg Arg Ile Val  
 85                      90                      95  
 Thr Thr Phe Leu Phe Ile Thr Gln Ile Gly Phe Cys Cys Val Tyr Phe  
 100                      105                      110  
 Leu Phe Val Ala Leu Asn Ile Lys Asp Val Met Asp His Tyr Tyr Lys  
 115                      120                      125  
 Met Pro Val Gln Ile Tyr Leu Leu Ile Met Leu Gly Pro Met Ile Leu  
 130                      135                      140  
 Leu Asn Leu Val Arg Asn Leu Lys Tyr Leu Thr Pro Val Ser Leu Val  
 145                      150                      155                      160  
 Ala Ala Leu Leu Thr Val Ala Gly Leu Ala Ile Thr Phe Ser Tyr Met  
 165                      170                      175  
 Leu Val Asp Leu Pro Asp Val His Thr Val Lys Pro Val Ala Thr Trp  
 180                      185                      190  
 Ala Thr Leu Pro Leu Tyr Phe Gly Thr Ala Ile Tyr Ala Phe Glu Gly  
 195                      200                      205  
 Ile Gly Val Val Leu Pro Leu Glu Asn Asn Met Arg Thr Pro Glu Asp  
 210                      215                      220  
 Phe Gly Gly Thr Thr Gly Val Leu Asn Thr Gly Met Val Ile Val Ala  
 225                      230                      235                      240  
 Cys Leu Tyr Thr Ala Val Gly Phe Phe Gly Tyr Leu Lys Tyr Gly Glu  
 245                      250                      255  
 His Val Glu Gly Ser Ile Thr Leu Asn Leu Pro Gln Gly Asp Thr Leu  
 260                      265                      270  
 Ser Gln Leu Val Arg Ile Ser Met Ala Val Ala Ile Phe Leu Ser Tyr  
 275                      280                      285  
 Thr Leu Gln Phe Tyr Val Pro Val Asn Ile Val Glu Pro Phe Val Arg  
 290                      295                      300  
 Ser His Phe Asp Thr Thr Arg Ala Lys Asp Leu Ser Ala Thr Val Leu  
 305                      310                      315                      320  
 Arg Val Val Leu Val Thr Phe Thr Phe Leu Leu Ala Thr Cys Ile Pro  
 325                      330                      335

Asn Leu Gly Ser Ile Ile Ser Leu Val Gly Ala Val Ser Ser Ser Ala  
                   340                                  345                                  350  
 Leu Ala Leu Ile Ala Pro Pro Ile Ile Glu Val Ile Thr Phe Tyr Asn  
                   355                                  360                                  365  
 Val Gly Tyr Gly Arg Phe Asn Trp Met Leu Trp Lys Asp Val Leu Ile  
                   370                                  375                                  380  
 Leu Ile Phe Gly Leu Cys Gly Phe Val Phe Gly Thr Trp Ala Ser Leu  
                   385                                  390                                  395                                  400  
 Ala Gln Ile Leu

<210> 6  
 <211> 403  
 <212> PRT  
 <213> Caenorhabditis elegans

<400> 6  
 Arg Leu Pro Thr Glu Asn Ser Leu Thr Pro Glu Gln Ala Phe Ile His  
   1                  5                                  10                                  15  
 Met Val Lys Ala Met Leu Gly Thr Gly Leu Leu Ser Leu Pro Leu Ala  
                   20                                  25                                  30  
 Phe Lys His Ser Gly Leu Phe Leu Gly Leu Ile Leu Thr Val Leu Ile  
                   35                                  40                                  45  
 Cys Leu Ile Cys Leu Tyr Cys Met Arg Gln Val Val Phe Ala Ala His  
                   50                                  55                                  60  
 Phe Val Cys Asn Arg Asn Gly Arg Asp Leu Ile Asp Tyr Ala Asn Ile  
                   65                                  70                                  75                                  80  
 Met Arg Gly Ala Val Glu Met Gly Pro Pro Trp Ile Lys Arg Asn Gly  
                   85                                  90                                  95  
 Tyr Phe Phe Lys Gln Leu Val Asn Val Asn Met Phe Ile Ser Gln Leu  
                   100                                  105                                  110  
 Gly Phe Cys Cys Val Tyr Phe Val Phe Met Ala Asp Asn Leu Glu Asp  
                   115                                  120                                  125  
 Phe Phe Asn Asn Asn Thr Ser Ile His Leu Ser Lys Ala Val Trp Met  
                   130                                  135                                  140  
 Leu Leu Leu Leu Ile Pro Met Leu Ser Ile Cys Ser Ile Arg Arg Leu  
                   145                                  150                                  155                                  160  
 Ser Ile Leu Ala Pro Phe Ala Met Ala Ala Asn Val Val Tyr Val Val  
                   165                                  170                                  175  
 Ala Val Ala Val Val Leu Phe Phe Phe Leu Ser Asp Leu Arg Pro Ile  
                   180                                  185                                  190  
 Ser Ser Leu Pro Trp Phe Gly Lys Ala Thr Asp Leu Pro Leu Phe Phe  
                   195                                  200                                  205  
 Gly Thr Val Met Phe Ala Phe Glu Gly Val Ala Val Ile Met Pro Ile  
                   210                                  215                                  220  
 Glu Asn Arg Met Gln Ser Pro His Ala Phe Ile Ser Trp Asn Gly Val  
                   225                                  230                                  235                                  240  
 Leu Asn Ser Ser Cys Leu Val Val Leu Ala Ile Phe Ser Val Thr Gly  
                   245                                  250                                  255  
 Phe Tyr Gly Tyr Leu Ser Leu Gly Asn Asp Val Lys Asp Thr Ala Thr  
                   260                                  265                                  270  
 Leu Asn Leu Pro Met Thr Pro Phe Tyr Gln Thr Ile Lys Leu Met Phe  
                   275                                  280                                  285  
 Val Ala Cys Ile Met Ile Ser Tyr Pro Leu Gln Phe Tyr Val Pro Met  
                   290                                  295                                  300  
 Glu Arg Ile Glu Lys Trp Ile Thr Arg Lys Ile Pro Val Asp Lys Gln

305                      310                      315                      320  
 Thr Leu Tyr Ile Tyr Ile Ala Arg Tyr Ser Gly Val Ile Leu Thr Cys  
                                  325                      330                      335  
 Ala Ile Ala Glu Leu Ile Pro His Leu Ala Leu Phe Ile Ser Leu Ile  
                                  340                      345                      350  
 Gly Ala Phe Ser Gly Ala Ser Met Ala Leu Leu Phe Pro Pro Cys Ile  
                                  355                      360                      365  
 Glu Leu Leu Thr Ser Tyr Ala Lys Asn Glu Leu Ser Thr Gly Leu Trp  
                                  370                      375                      380  
 Ile Lys Asn Ile Val Leu Leu Thr Phe Ala Phe Ile Gly Phe Thr Thr  
 385                      390                      395                      400  
 Gly Thr Tyr

<210> 7  
 <211> 476  
 <212> PRT  
 <213> Human

<400> 7  
 Met Ser Thr Gln Arg Leu Arg Asn Glu Asp Tyr His Asp Tyr Ser Ser  
 1                      5                      10                      15  
 Thr Asp Val Ser Pro Glu Glu Ser Pro Ser Glu Gly Leu Asn Asn Leu  
                                  20                      25                      30  
 Ser Ser Pro Gly Ser Tyr Gln Arg Phe Gly Gln Ser Asn Ser Thr Thr  
                                  35                      40                      45  
 Trp Phe Gln Thr Leu Ile His Leu Leu Lys Gly Asn Ile Gly Thr Gly  
                                  50                      55                      60  
 Leu Leu Gly Leu Pro Leu Ala Val Lys Asn Ala Gly Ile Val Met Gly  
 65                      70                      75                      80  
 Pro Ile Ser Leu Leu Ile Ile Gly Ile Val Ala Val His Cys Met Gly  
                                  85                      90                      95  
 Ile Leu Val Lys Cys Ala His His Phe Cys Arg Arg Leu Asn Lys Ser  
                                  100                      105                      110  
 Phe Val Asp Tyr Gly Asp Thr Val Met Tyr Gly Leu Glu Ser Ser Pro  
                                  115                      120                      125  
 Cys Ser Trp Leu Arg Asn His Ala His Trp Gly Arg Arg Val Val Asp  
                                  130                      135                      140  
 Phe Phe Leu Ile Val Thr Gln Leu Gly Phe Cys Cys Val Tyr Phe Val  
 145                      150                      155                      160  
 Phe Leu Ala Asp Asn Phe Lys Gln Val Ile Glu Ala Ala Asn Gly Thr  
                                  165                      170                      175  
 Thr Asn Asn Cys His Asn Asn Glu Thr Val Ile Leu Thr Pro Thr Met  
                                  180                      185                      190  
 Asp Ser Arg Leu Tyr Met Leu Ser Phe Leu Pro Phe Leu Val Leu Leu  
                                  195                      200                      205  
 Val Phe Ile Arg Asn Leu Arg Ala Leu Ser Ile Phe Ser Leu Leu Ala  
                                  210                      215                      220  
 Asn Ile Thr Met Leu Val Ser Leu Val Met Ile Tyr Gln Phe Ile Val  
 225                      230                      235                      240  
 Gln Arg Ile Pro Asp Pro Ser His Leu Pro Leu Val Ala Pro Trp Lys  
                                  245                      250                      255  
 Thr Tyr Pro Leu Phe Phe Gly Thr Ala Ile Phe Ser Phe Glu Gly Ile  
                                  260                      265                      270  
 Gly Met Val Leu Pro Leu Glu Asn Lys Met Lys Asp Pro Arg Lys Phe  
                                  275                      280                      285

Pro	Leu	Ile	Leu	Tyr	Leu	Gly	Met	Val	Ile	Val	Thr	Ile	Leu	Tyr	Ile	290	295	300
Ser	Leu	Gly	Cys	Leu	Gly	Tyr	Leu	Gln	Phe	Gly	Ala	Asn	Ile	Gln	Gly	305	310	315
Ser	Ile	Thr	Leu	Asn	Leu	Pro	Asn	Cys	Trp	Leu	Tyr	Gln	Ser	Val	Glu	325	330	335
Leu	Leu	Tyr	Leu	Gly	Gly	Ile	Cys	Leu	Thr	Tyr	Pro	Leu	Gln	Phe	Tyr	340	345	350
Val	Ser	Ala	Lys	Ile	Ile	Val	Pro	Val	Ile	Val	Ser	Trp	Val	Cys	Lys	355	360	365
Cys	Cys	Thr	Leu	Met	Val	Asp	Leu	Gly	Ile	Gly	Ser	Ala	Met	Leu	Cys	370	375	380
Lys	Thr	Cys	Ile	Leu	Ala	Ile	Leu	Ile	Pro	Arg	Leu	Asp	Leu	Val	Ile	385	390	395
Ser	Leu	Val	Gly	Ser	Val	Ser	Ser	Ser	Ala	Leu	Ala	Leu	Ile	Ile	Pro	405	410	415
Pro	Leu	Leu	Glu	Val	Thr	Thr	Phe	Tyr	Ser	Glu	Gly	Met	Ser	Pro	Leu	420	425	430
Thr	Ile	Phe	Lys	Asp	Ala	Leu	Ile	Ser	Ile	Leu	Gly	Phe	Val	Gly	Phe	435	440	445
Val	Val	Gly	Thr	Tyr	Glu	Ala	Leu	Tyr	Glu	Leu	Ile	Gln	Pro	Ser	Asn	450	455	460
Ala	Pro	Ile	Phe	Ile	Asn	Ser	Thr	Cys	Ala	Phe	Ile					465	470	475